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24738 7590 03/19/2010

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EXAMINER

DRABIK, SARAH E

ART UNIT

PAPER NUMBER

2455

DATE MAILED: 03/19/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,425	04/05/2005	Kees Gerard Willem Goossens	NL03 0793 US	6693

TITLE OF INVENTION: INTEGRATED CIRCUIT AND METHOD FOR ESTABLISHING TRANSACTIONS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/21/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/21/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
DRABIK, SARAH E	2455	709-245000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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			ART UNIT	PAPER NUMBER

2455

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 859 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 859 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

10/530,425

Applicant(s)GOOSSENS, KEES GERARD
WILLEM**Examiner**

SARAH E. DRABIK

Art Unit

2455

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed October 21, 2009.
2. ☒ The allowed claim(s) is/are 1, 4-6, 8-13, and 15 (renumbered 1-11).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date ____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Mike Belk on March 9, 2010.
3. The application is amended as follows:

Claim 1. (Currently Amended) An integrated circuit comprising:

- (a) a plurality of modules comprising a plurality of message sending modules M and a plurality of message receiving modules S;
- (b) a network configured to exchange messages between said plurality of message sending modules M and said plurality of message receiving modules S based on request-response transactions;
- (c) active network interface means associated with each of said plurality of message sending modules M;
- (d) passive network interface means associated with each of said plurality of message receiving modules S,

wherein said active and passive network interface means are configured to manage communication between said plurality of message sending modules M and said plurality of message receiving modules S by sending requests encoding operations, such as read, write, flush, test, set and nop, between the plurality of message sending modules M and the plurality of message receiving modules S;

wherein said active network interface means is configured to perform communication management functions by receiving message requests issued by said plurality of message sending modules M including first information and second information,

wherein said first information is indicative of [[the]] a location of [[said]] a message receiving module S within the network being addressed by one of said plurality of message sending modules M in said message request and is comprised of (1) a connection identifier identifying two or more message receiving modules S and (2) a port identifier of the passive network interface means, and

wherein said second information is indicative of a particular location within the message receiving module S, such as memory or register address,

wherein said active network interface means includes address translation means adapted to **arrange said first information and said second information as a single address and** determine from said received message requests which of said message receiving modules S is being addressed in said message requests issued from said plurality of message sending modules M based on said [[first information]] **single**

address and further determine the particular location within the addressed message receiving module S based on said [[second information]] **single address**.

Claim 2. (Cancelled)

Claim 3. (Cancelled)

Claim 4. (Previously Presented) The integrated circuit according to claim 1, wherein said address translation means comprises an address mapping table configured to store relations between global and local memory mapping.

Claim 5. (Previously Presented) Integrated circuit according to claim 4, wherein said address mapping table contains fields for every channel of a connection between said message sending module M and at least one addressed message receiving module S, for network interface ports of a connection, and for local addresses in said at least one addressed message receiving module.

Claim 6. (Currently Amended) A method for exchanging messages in an integrated circuit comprising a plurality of modules, the messages between the plurality of modules being exchanged via a network wherein a message issued by an addressing module M comprises:

first information indicative of [[the]] a location of an addressed message receiving module S within the network and is comprised of (1) a connection identifier identifying two or more message receiving modules S and (2) an identifier of [[the]] a passive network interface means associated with the addressed message receiving module S, and second information indicative of a particular location within the addressed message receiving module S, such as a memory, or a register address, the method including the steps of:

(a) [[[b)]] issuing from said addressing module M a message request including said first information, said second information, and data and/or connection properties to an address translation unit included as part of an active network interface module associated with said addressing module M,

(b) [[[a)]] arranging, at said [[message sending module M]] address translation unit, the first and the second information comprising said issued message as a single address,

(c) determining, at said address translation unit, which message receiving module S is being addressed in said message request issued from said [[message sending]] addressing module M based on said single address, and

(d) further determining, at said address translation unit, the particular location within the addressed message receiving module S based on said single address.

Claim 7. (Cancelled).

Claim 8. (Previously Presented) The method according to claim 6, wherein communication between said plurality of modules is performed over connections.

Claim 9. (Currently Amended) The method according to claim 8, wherein a connection comprises a set of channels, each channel having a set of connection properties between said [[message sending]] **addressing** module M and at least one message receiving module.

Claim 10. (Previously Presented) The method according to claim 8, wherein connection types comprise: simple connections, multicast connections, narrowcast connections.

Claim 11. (Previously Presented) The method according to claim 9, wherein said connection properties comprise: ordering, flow control, throughput, latency, lossiness, transmission termination, transaction completion, data correctness, priority and data delivery.

Claim 12. (Currently Amended) The method according to claim 10, wherein said simple connection is a connection between said [[message sending]] **addressing** module M and a single addressed [[slave]] **message receiving** module S.

Claim 13. (Currently Amended) The method according to claim 10, wherein said multicast and narrowcast connections are connections between said [[message

sending]] **addressing** module M and one or more addressed [[slave]] **message receiving** modules S.

Claim 14. (Cancelled)

Claim 15. (Currently Amended) The method according to claim [[7]] **6**, wherein said [[at least one]] **active** network interface [[means]] **module** comprises at least two network interface ports to allow [[a message sending]] **an addressing** module M associated with said [[at least one network interface]] **active network interface module** to communicate with a router network or at least one other message receiving module S from among said [[plurality of]] **two or more** message receiving modules S.

Claim 16. (Cancelled)

Allowable Subject Matter

4. Claims 1, 4-6, 8-13, and 15 (renumbered as claims 1-11) are allowed over the prior art of record.

5. The following is an examiner's statement of reasons for allowance:

In interpreting the claims, in light of the specification and the applicant's arguments filed on October 21, 2009, the Examiner finds the claimed invention to be patentably distinct from the prior art of record.

The prior art of record does not teach, either singly or in combination, the claimed limitations of "an integrated circuit comprising:

(a) a plurality of modules comprising a plurality of message sending modules M and a plurality of message receiving modules S;

(b) a network configured to exchange messages between said plurality of message sending modules M and said plurality of message receiving modules S based on request-response transactions;

(c) active network interface means associated with each of said plurality of message sending modules M;

(d) passive network interface means associated with each of said plurality of message receiving modules S,

wherein said active and passive network interface means are configured to manage communication between said plurality of message sending modules M and said plurality of message receiving modules S by sending requests encoding operations, such as read, write, flush, test, set and nop, between the plurality of message sending modules M and the plurality of message receiving modules S;

wherein said active network interface means is configured to perform communication management functions by receiving message requests issued by said plurality of message sending modules M including first information and second information,

wherein said first information is indicative of a location of a message receiving module S within the network being addressed by one of said plurality of message

sending modules M in said message request and is comprised of (1) a connection identifier identifying two or more message receiving modules S and (2) a port identifier of the passive network interface means, and

wherein said second information is indicative of a particular location within the message receiving module S, such as memory or register address,

wherein said active network interface means includes address translation means adapted to arrange said first information and said second information as a single address and determine from said received message requests which of said message receiving modules S is being addressed in said message requests issued from said plurality of message sending modules M based on said single address and further determine the particular location within the addressed message receiving module S based on said single address.”

Specifically, the prior art fails to disclose or render obvious arranging, at the address translation unit, the first and the second information comprising said issued message as a single address, wherein said first information is indicative of a location of a message receiving module S within the network being addressed by one of said plurality of message sending modules M in said message request and is comprised of (1) a connection identifier identifying two or more message receiving modules S and (2) a port identifier of the passive network interface means, and wherein said second information is indicative of a particular location within the message receiving module S, such as memory or register address; and further determining from said received message requests which of said message receiving modules S is being addressed in

said message requests issued from said plurality of message sending modules M based on said single address and the particular location within the addressed message receiving module S based on said single address.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARAH E. DRABIK whose telephone number is (571)270-3990. The examiner can normally be reached on Monday through Friday, 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Najjar Saleh can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. E. D./
Examiner, Art Unit 2455
03/09/2010
/saleh najjar/

Supervisory Patent Examiner, Art Unit 2455